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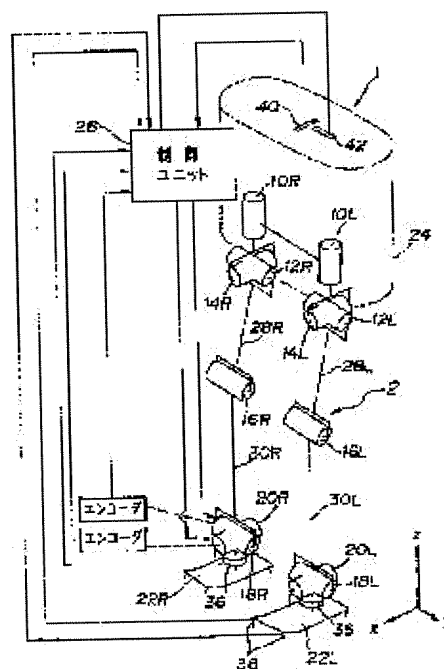
(71)Applicant : HONDA MOTOR CO LTD
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 TAKAHASHI HIDEO

(54) CONTROLLER OF LEG TYPE MOBILE ROBOT

(57)Abstract:

PURPOSE: To maintain a stable position at all times even at the time of walking a road surface on which unexpected roughness is found, by installing an operational means, operating a second manipulated variable in order to compensate a detected variation according to it, adding the second manipulated variable operated into this specified manipulated variable, and giving it to a servomotor.

CONSTITUTION: An actual angle, a desired angle and a deviation in a leg part link 2 are detected each with an absolute angle to the gravitational direction by a detecting means 36. According to this detected deviation, a second manipulated variable is operated in order to compensate it by an operational means 26. Next, a value added with the second manipulated variable operated into the specified manipulated variable is given to a servomotor, through which a stable walk is secured even on a road surface where unexpected roughness is found, in a biped mobile robot.



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(71)Applicant : HONDA MOTOR CO LTD

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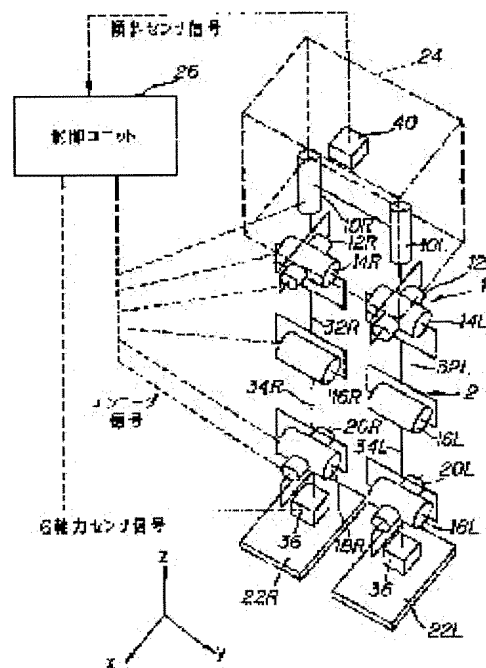
(72)Inventor : TAKENAKA TORU

(54) ATTITUDE STABILIZATION CONTROL DEVICE FOR LEG TYPE MOBILE ROBOT

(57)Abstract:

PURPOSE: To heighten stability to disturbance by performing the feedback of the operating quantity, corresponding to the deviation of the quantity-of-state such as the inclination of an actual robot to a model, to the model at least so as to correct the behavior of the model at the time of stabilizing the attitude of a model trailing type leg-type mobile robot.

CONSTITUTION: In a biped walking leg type mobile robot with six joints provided at each leg part link 2 forming each lateral leg, each ankle part is provided with a six-axis tension sensor 36, flat foot parts 22R, 33L are provided at four corners with capacitance type grounding switches, and an upper body 24 is provided with an inclination sensor. The electric motor of each joint is provided with a rotary encoder for detecting its rotating quantity, and the output signal of each above-mentioned detecting means is sent to a control unit 26 to perform walk control on the basis of a model. At this time, the floor reaction target value to be supplied at least to the model is corrected according to the inclination deviation of an actual robot to the model. The walking form of the model is then corrected in such a way as to satisfy the corrected floor reaction target value for the convergence of the inclination deviation.



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